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1. A composition for interacting with a ligand, which composition comprises a non-covalent association of a plurality of distinct conjugates, each conjugate comprising a head group and a tail group, wherein the tail groups of the conjugates form a hydrophobic aggregation and the conjugates are movable within the association so that, in the presence of a ligand, at least two of the head groups are appropriately positioned to form an epitope capable of interacting with the ligand more strongly than each of head groups individually.

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2. A composition according to claim 1, wherein each conjugate has a head group selected from: an amino acid or peptide; a peptide analogue; a mono- or poly-saccharide; a mono- or poly-nucleotide; a sterol, a water-soluble vitamin; a porphyrin or haem nucleus; a metal ion chelate; a water-soluble drug; a hormone; and an enzyme substrate.

Specif.

3. A composition according to claim 2, wherein each head group comprises an amino acid.

4. A composition according to claim 3, wherein each head group comprises a peptide comprising the amino acid.

5. (Amended) A composition according to claim 3,
wherein the head groups which form the epitope comprise terminal amino acids selected from at least two of the following:
hydrophobic amino acids, hydroxylic amino acids, acidic amino acids, amide amino acids, basic amino acids, and aromatic amino acids.

6. (Amended) A composition according to claim 1,
wherein each tail group is the same or different and comprises a lipophilic group selected from a straight or branched-chain fatty acid, alcohol or aldehyde having at least 8 carbon atoms; a lipidic amino acid analogue; a prostaglandin; a leukotriene; a mono- or di-glyceride; a sterol; a sphingosine or ceramide derivative; and a silicon or halogen-substituted derivative of such lipophilic group.

Spel. etc.

7. A composition according to claim 6, wherein each lipophilic group comprises a C₁₀ to C₁₈ fatty acid.

8. (Amended) A composition according to claim 1,
wherein each conjugate further comprises a spacer group linking the head group to the tail group.

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9. A composition according to claim 8, wherein the spacer group is hydrophilic.

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10. (Amended) A composition according to claim 8,
wherein the spacer group comprises an amino acid, a hydroxy acid, a sugar or a polyethylene glycol.

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11. (Amended) A composition according to claim 1, wherein the non-covalent association comprises a lamellar structure, a micelle or a liposome.

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12. (Amended) A composition according to claim 1,
for use as a medicament, a prophylactic or a diagnostic.

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13. (Amended) Use of a conjugate comprising a head group and a tail group, for the preparation of a composition according to claim 1.

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14. Use according to claim 13, wherein the head group is selected from: an amino acid or peptide, a peptide analogue; a mono- or poly-saccharide; a mono- or polynucleotide; a sterol, a water-soluble vitamin; a porphyrin or haem nucleus; a metal ion chelate; a water-soluble drug; a hormone; and an enzyme substrate.

15. Use according to claim 14, wherein the head group comprises an amino acid.

16. Use according to claim 15, wherein the head group comprises a peptide comprising the amino acid.

17. (Amended) Use according to claim 15,
wherein the amino acid comprises a terminal amino acid selected from hydrophilic amino acids, hydroxylic amino acids, acidic amino acids, amide amino acids, basic amino acids, and aromatic amino acids.

18. (Amended) Use according to claim 13,
wherein the tail group comprises a lipophilic group selected from a straight or branched-chain fatty acid, alcohol or aldehyde having at least 8 carbon atoms; a lipidic amino acid analogue; a prostaglandin; a leukotriene; a mono- or di-glyceride; a sterol; a sphingosine or ceramide derivative; and a silicon or halogen-substituted derivative of such a lipophilic group.

19. Use according to claim 18, wherein the lipophilic group comprises a C₁₈ to C₁ fatty acid.

20. (Amended) Use according to claim 13,
wherein the conjugate further comprises a spacer group linking the head group to the tail group.

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21. Use according to claim 20, wherein the spacer group is hydrophilic.

22. Use according to claim 21, wherein the spacer group comprises an amino acid, a hydroxy acid, a sugar or a polyethylene glycol.

23. A method for producing a composition for interacting with a ligand, which method comprises:

(a) providing a plurality of distinct conjugates, each conjugate comprising a head group and a tail group; and

(b) forming from the plurality of conjugates a non-covalent association thereof, in which the tail groups aggregate hydrophobically and in which the conjugates are movable so that, in the presence of a ligand, at least two of the head

groups are appropriately positioned to form an epitope capable of interacting with the ligand more strongly than each of head groups individually.

24. (Amended) A method according to claim 23,
wherein each conjugate is as defined in claim 13. ↗ Obj,

25. (Amended) A method according to claim 23,
wherein the non-covalent association comprises a lamellar structure, a micelle or a liposome. *genz*

26. (Amended) A method according to claim 23,
wherein the step of providing the plurality of conjugates comprises

- (i) selecting a set of conjugates with an array of head groups;
- (ii) forming a non-covalent association therefrom, in which the tail groups aggregate hydrophobically and in which the conjugates are movable;
- (iii) assaying for sufficient interaction between the non-covalent association and the ligand;
- (iv) optionally repeating steps (i) to (iii) using a set of conjugates with a modified array of head groups; and
- (v) on finding sufficient interaction in step (iii) selecting the set of conjugates as the plurality of conjugates in step (a).

27. A method according to claim 26, wherein the array of head groups comprises (i) at least one terminal amino acid from each of the following classes of amino acid:

hydrophobic amino acids, hydroxylic amino acids, acidic amino acids and amide amino acids; and (ii) at least two further terminal amino acids comprising at least one basic amino acid and at least one aromatic amino acid, or at least two basic amino acids or aromatic amino acids.

28. A method according to claim 27, wherein the modified array of head groups used in step (iv) comprises the array of head groups used in steps (i) to (iii) in which the at least two further terminal amino acids are different from those used in steps (i) to (iii).

29. A method according to claim 26, wherein the array of head groups comprises (i) at least one terminal amino acid from each of the following classes of amino acid: hydrophobic amino acids, hydroxylic amino acids, acidic amino acids, amide amino acids, basic amino acids and aromatic amino acids.

30. A method according to claim 29, wherein the modified array of head groups used in step (iv) comprises the array of head groups used in steps (i) to (iii) in which the at least

one terminal amino acid from one of the classes of amino acid is either absent or replaced by a charged version thereof.

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31. (Amended) A method for producing a molecule for interaction with a ligand, comprising:

- (1) producing a composition according to the method of claim 23;
- (2) identifying the at least two head groups which form an epitope for the ligand in the composition; and
- (3) producing a molecule incorporating the functional groups of the at least two head groups optionally spaced apart by one or more linker groups so that the molecule is capable of interacting with the ligand more strongly than each of the head groups individually.